No. 8200028

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

W. Atlee Burpee Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TOMATO

'Super Beefsteak'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 19th *day of* August *in the year of our Lord one thousand nine hundred and* eighty-two.

Attest:

Kenneth H. Ev...
Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R Block
Secretary of Agriculture

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and $500 fee ($250 filing fee and $250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.

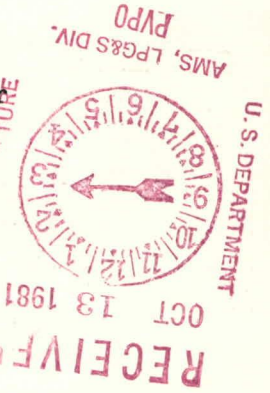
13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.

14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)

15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

FORM APPROVED
OMB NO. 40-R3822

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
	Super Beefsteak	PV NUMBER 8200028

2. KIND NAME	3. GENUS AND SPECIES NAME	FILING DATE	TIME (A.M. / P.M.)
TOMATO	Lycopersicon Esculentum	11/23/81	11:00
4. FAMILY NAME (BOTANICAL)	**5. DATE OF DETERMINATION**	**FEE RECEIVED**	**DATE**
Solanaceae	1980	$ 500.00 $ 250.00	11/23/81 7/26/82

6. NAME OF APPLICANT(S)	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*	8. TELEPHONE AREA CODE AND NUMBER
W. ATLEE BURPEE COMPANY	300 Park Avenue Warminster, PA 18974	805 525-3348 (215) 674-4900

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Pennsylvania	1915

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:
John J. Mondry
W. ATLEE BURPEE COMPANY
335 South Briggs Road, Santa Paula, CA 93060

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [ ] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [ ] YES [X] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?
[ ] YES [X] NO	[ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

16. ~~DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? [ ] YES [ ] NO~~

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

Oct. 7, 1981
(DATE)

W. A. Burpee Co.
John J. Mondry
Research Director
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

FORM GR-470 (1-78)

W. Atlee Burpee Co.
335 S. Briggs Road
Santa Paula, California 93060

(revised July 2, 1982)

TOMATO

Super Beefsteak

13A. Exhibit A. Origin and Breeding History of the Variety

The variety is a selection from F6 generation of Beefmaster developed by Peto Seed Company.

From F2 generation on, the plants were screened for Verticillium Fusarium and root knot nematode (Meloidogyne spp.) tolerance as well as smooth large fruit and good fruit set. Mass selection has been made from F6 generation when it was considered genetically stable.

Large scale production field using F7, F8 and F9 generations indicate that the variety is genetically stable and the population is uniform.

W. Atlee Burpee Co.
335 S. Briggs Road
Santa Paula, California 93060

(revised July 2, 1982)

TOMATO

Super Beefsteak

13B. Exhibit B. Novelty Statement

Super Beefsteak is most similar to Beefsteak in plant habit, flower morphology and fruit size.

Beefsteak is considered synonymous with Red Ponderosa, Crimson Cushion and Enormous (see attachments from Asgrow and Woodruff).

Unlike regular Beefsteak, Super Beefsteak is characterized by resistance to Verticillium Fusarium and root knot nematode (Meloidogyne spp.). The plants are robust, dark green leaved indeterminate and extremely prolific of large, smooth and somewhat flattened fruits. The fruits have relatively small blossom end scars and little catface.


RECEIVED
JUL 6 1982

[3] No. of nodes below the first inflorescence: 1 = few ( ) 2 = intermediate ( ) 3 = many (13)

[3] No. of nodes (leaves) between inflorescences

[3] Thickness: 1 = slender, weak 2 = medium thickness 3 = thick, stiff

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4. LEAF (mature leaf under the 1st to 3rd truss):

[1] Type: 1 = tomato 2 = potato

[2] Division: 1 = once-pinnate 2 = intermediate (pinnate-bipinnate) 3 = bipinnate, many small leaflets with the large ones

[3] Attitude: 1 = semi-erect 2 = horizontal 3 = drooping

[2] Leaflet blade: 1 = thin 2 = medium 3 = thick

[2] Bases of major leaflets: 1 = even 2 = oblique (the sides offset on petiole)

[3] Margins of major leaflets: 1 = nearly entire 2 = shallowly toothed or scalloped 3 = deeply toothed or cut, esp. towards base

[2] Surface of major leaflets: 1 = smooth 2 = rugose (bumpy or veiny)

[1] Leaflet: 1 = normal 2 = slightly wilty 3 = wilty

[2] Shape of major leaflets: 1 = broadly ovate 2 = ovate to lanceolate 3 = slender and lanceolate, tapered to a point

[1] Pubescence or hairiness: 1 = normal 2 = wooly

[4] Color of leaflets: 1 = light green ( ) 2 = medium green ( ) 3 = gray-green ( ) 4 = dark green (RHS 137B)

[3] Color of leaf on check variety (same scale): Variety Beefsteak

[1] Anthocyanin coloration in veins of leaf: 1 = absent 2 = present RHS 137C

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5. INFLORESCENCE: [1] Type: 1 = simple (racemose) 2 = forked (2 major axes) 3 = compound (much branched)

[2] No. of flowers setting fruit: 1 = 1-4, 2 = 4-8, 3 = 8-12, 4 = 12 and more (in 2nd or 3rd truss)

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6. FLOWER:

[1] Calyx: 1 = normal (lobes awl-shaped) 2 = macrocalyx (lobes large, leaflike)

[1] Flower color: 1 = yellow 2 = old gold 3 = white or tan

[2] Style: exsertion: 1 = included 2 = even with stamens 3 = exserted

[1] pubescence: 1 = absent 2 = sparse 3 = dense

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY
TOMATO (Lycopersicon esculentum Mill.)

Name of applicant	Temporary designation	Variety Name
W. ATLEE BURPEE COMPANY		Super Beefsteak
Address (Street and No. or R.F.D. No., City, State, Zip)		FOR OFFICIAL USE ONLY
300 Park Avenue, Warminster, PA 18974		PVPO NUMBER 8200028

Choose the appropriate response which characterizes the variety in the characteristics described below. When a single quantitative value is requested (e.g. fruit weight) your response should represent the typical, or modal, value of a statistically adequate sample of plants. When indicated, the applicant variety should be paired with a well-known check variety of the same general type, and measurements should be indicated for both varieties grown in the same trial(s). The characters on this form should be described from spaced, unpruned, unstaked plants grown under normal conditions of culture for the variety. Indicate whether trial data are from the greenhouse_____ or field plantings X . Give location(s) and date(s) of trials 1981 - Santa Paula, CA 93060 .
When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box (e.g. [0][9], or [0][8][1], etc.)
You need not answer every question if the information is unknown; however, the more complete your response, the more easily yourvariety can be identified.

1. SEEDLING: (2 - 15 cm, well-illuminated)
   - [2] Anthocyanin in hypocotyl: 1 = absent 2 = present
   - [1] Cotyledon: 1 = normal 2 = giant

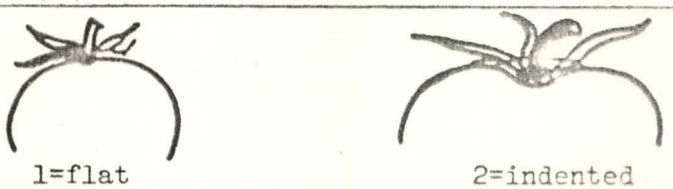
2. MATURE PLANT:
   - [1] Growth: 1 = indeterminate 2 = semi-determinate 3 = determinate
   - [3] Size (compared to others of its growth type): 1 = small 2 = medium 3 = large
   - [2] Habit: 1 = sprawling (decumbent) 2 = semi-erect 3 = erect
   - [3] Foliage cover: 1 = light 2 = moderate 3 = heavy

3. STEM:
   - [3] Internode length (between the 1st and 4th inflorescences):
     1 = short ( ) 2 = intermediate ( )
     3 = long (100 mm)
   - [2] Branching: 1 = sparse ( ) 2 = intermediate ( )
     3 = profuse ( )
   - [2] Branching at cotyledonary node: 1 = present 2 = absent
   - [3] Pubescence: 1=smooth (no long hairs) 2=sparsely hairy 3=densely hairy or canescent

[2] Shape of blossom end:

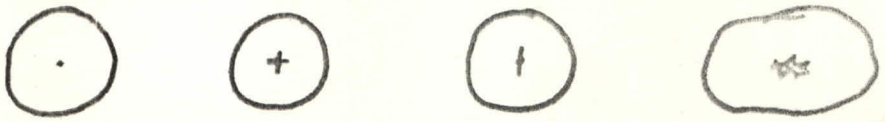
1=indented 2=flat 3=pointed

[2] Shape of stem end: 1 =



1=flat 2=indented

[3] Shape of pistil scar:



1=dot 2=stellate 3=linear 4=irregular

[2] Fruit surface: 1 = smooth 2 = slightly fasciated 3 = moderately fasciated

[3] Immature fruit color: 1 = light green ( ) 2 = lt. gray-green( )
(mature-green stage) 3 = apple green (RHS chart 141D) 4 = dark green ( )

[2] Immature fruit pattern: 1 = green shouldered 2 = uniform green
(mature-green stage) 3 = with darker radial stripes

[5] Mature fruit color: 1 = white 2 = yellow 3 = tangerine 4 = pink
(table-ripe) 5 = red 6 = crimson 7 = brownish-red 8 = greenish
RHS chart 30B 9 = other (specify)_____

[2] Flesh color (mature): 1 = yellow 2 = red 3 = crimson 4 = other_____
RHS chart 34A

[2] Epidermis color: 1 = colorless 2 = yellow

[3] Thickness of pericarp: 1 = thin (>3 mm) 2 = medium (3-6 mm) 3 = thick (>6 mm)

[3] Thickness of pericarp of check variety (same scale) Variety: Beefsteak

[3] Core size: 1 = small ( ) 2 = medium ( ) 3 = large (29 mm)

[2] Stem scar size: 1 = small ( ) 2 = medium (25 mm) 3 = large ( )

[3] No. of locules: 1 = two 2 = three and four 3 = five or more

[3] Fruit firmness[1] (minimum table-ripe): 1 = extra-soft ( )
2 = very soft ('Walter') 3 = soft ('Campbell 28') 4 = fairly firm ('Roma VF')
5 = firm ('Heinz 1706') 6 = very firm ('UC-82')

8. CHEMISTRY AND COMPOSITION OF MATURE-RIPE FRUITS: (See "Tomato Products," 5th ed., National Canners Assn. Bull. 27-L, for test methods. Pair values of submitted variety with those of at least one well-known check variety of similar type grown in the same trial. Specify names of checks.)

[1]For definitions of these subjective terms see Kader & Morris (1976) In: Proc. 2nd Tomato Quality Workshop.

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[1] Anthers: 1 = all fused into tube 2 = separating into 2 or more groups at anthesis

[3] Fasciation (1st flower of 2nd or 3rd truss):
1 = absent 2 = occasionally present 3 = freq. present

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7. FRUIT (3rd fruit of 2nd or 3rd truss):

[1] Abscission layer: 1 = present (pedicellate) 2 = absent (jointless)

[0][9] mm. Length of pedicel (from abscission layer or joint to calyx attachment)

[10] Mature fruit: Maximum equatorial diameter: 1 = small cherry (< 20 mm)
2 = large cherry (20 - 35 mm) 3 = midget (35 - 48 mm)
4 = U. S. extra small (48 - 54 mm) 5 = U.S. small (54 - 58 mm)
6 = U.S. medium (58 - 64 mm) 7 = U.S. large (64 - 73 mm)
8 = U.S. extra large (73 - 88 mm) 9 = U.S. maximum large (88-100 mm)
10 = U.S. maximum large (>100 mm)

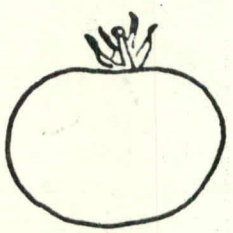
[10] Max. equatorial diameter of check variety (specify) Beefsteak

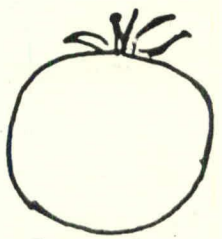
[0][7][8] mm. Max. fruit length [0][7][0] mm. Check variety Beefsteak

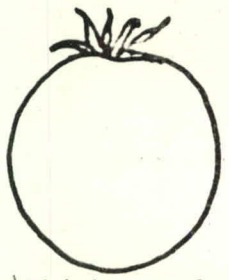
[4][7][3] g Fruit weight [4][3][7] g Check variety Beefsteak

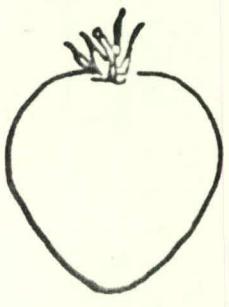
Fruit shape: [1] Predominant [2] Secondary

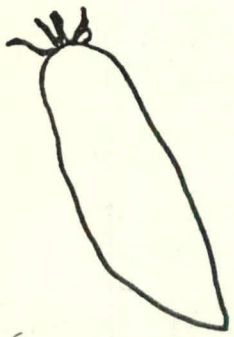

1=flattened


2=slightly flattened

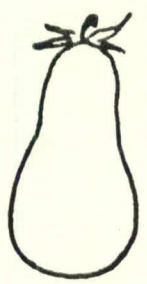

3=round

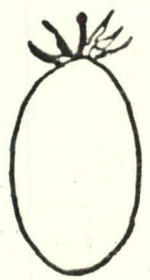

4=high round


5=heart-shaped


6= chili-shaped


7=lengthened-cylindrical


8=lengthened-pearshaped


9=plum- or eggshaped

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[2] Shape of transverse section:


1=round


2=flattened


3=angular


4=irregular

6

[0][0] Region: 1 = Northeast/Midatlantic 2 = Southeast 3 = Midwest/Great Lakes
[1][7] 4 = Mid-south 5 = North-central 6 = Northwest 7 = Southwest

---

11. RESISTANCE OR TOLERANCE TO ENVIRONMENTAL STRESS:

[ ] High temperature fruit set (subjective evaluation based on fruit set at temperatures that normally inhibit set in area of evaluation) :
1 = light 2 = moderate 3 = heavy AREA_____

[ ] Low temperature fruit set (subjective evaluation based on fruit set at low temperatures that normally inhibit germination): AREA_____
1 = light 2 = moderate 3 = heavy

[ ] Low temperature seed germination (at 10° C): 1 = poor ( )
2 = fair ( ) 3 = good ( )

[2] Blossom end rot: 1 = susceptible 2 = intermediate 3 = resistant

[2] Catface: 1 = essentially absent 2 = slight 3 = moderate to severe

---

12. DISEASE AND PEST REACTION (Use code: 0 = not tested, 1 = susceptible, 2 = resistant) If claim of novelty is based wholly or in part upon disease resistance, trial data should be appended to this section and should include date and location of trial(s), method of testing, reaction of application variety, and reaction of check varieties (identified by name).

Viral Diseases:

[0] Cucumber mosaic [0] Curly top [0] Potato-Y virus

[0] Tomato spotted wilt [1] Tobacco mosaic, Race 0

[1] Tobacco mosaic, Race 1 (Tm 1) [1] Tobacco mosaic, Race 2 (Tm2

[1] Tobacco mosaic, Race 2^2 (Tm 2^2) [0] Tomato yellows

Bacterial Diseases:

[0] Bacterial canker (Corynebacterium michiganense)

[0] Bacterial speck (Pseudomonas tomato)

[0] Bacterial wilt (Pseudomonas solanacearum)

[0] Bacterial spot (Xanthomonas vesicatorium)

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	SUBMITTED VAR.	CHECK VAR. Beefsteak	CHECK VAR.	CHECK VAR.
pH:				
Titratable acidity (as % citric):				
Total solids (dry matter; seeds & skin removed)				
Soluble solids (as °Brix)	5.50	5.45		
Sugar/Acid ratio (% sol. solids /% citric acid equiv)				
Ascorbic acid (as mg /100 g ex-pressed juice)				

9. PHENOLOGY:

[ ][ ][ ] % usable fruit at first harvest [ ][ ][ ] %, check var. (_____)

[7][7] Days from seed to 1st open flower [7][0] days, check var. (Beefsteak)

[1][3][3] Days from seeding to first ripe fruit [1][2][6] days, check var. (Beefsteak)

[5][6] Days from anthesis to ripe fruit, first truss [5][6] days, check var. (Beefsteak)

[1] Concentration of flowering/fruiting: 1 = poor, lasts over long season ( ) 2 = moderately concentrated ( ) 3 = very concentrated ( )

[4] Maturity, subjective evaluation coded as: 1 = early ('Earliana', 'Rocket') 2 = medium early ('Super Sioux', 'Glamour') 3 = medium ('Fantastic', 'Homestead') 4 = med. late ('Manalucie','Heinz 1370') 5 = late ('Pearson', 'San Marzano LF')

10. ADAPTATION (if more than one category applies, list all in rank order if possible)

[0][1] Culture: 1 = field 2 = greenhouse

[0][1][2] Principal use(s): 1 = home garden 2 = fresh market 3 = processing

8

Pollutants:

[0] Ozone

[0] Sulfur dioxide

[ ] Other (specify)_____

REFERENCES

Anonymous, 1976. All About Tomatoes. Ortho Books, Chevron Chemical Co., San Francisco. In three volumes: Midwest/Northeast Edition, West Edition, and South Edition.

Ware, G. W. & J. P. McCollum, 1968. Producing Vegetable Crops. The Interstate Printer & Publishers, Inc., Danville, Illinois. (Chapter 30, pp. 451-473, "Tomatoes".

Webb, R. E., T. H. Barksdale, & A. K. Stoner, 1973, "Tomatoes", pp. 344-361 In: Nelson, R. R. (Ed.), Breeding Plants for Disease Resistance. Pennsylvania State University Press, University Park.

Young, P. A. & J. W. MacArthur, 1947. Horticultural characters of tomatoes. Bull. Texas Agric. Exper. Station No. 698.

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Fungal Diseases:

[0] Anthracnose (Colletotrichum spp.) [0] Botrytis rot or mold (B. cinerea)

[0] Collar rot (Alternaria solani) [0] Early blight (Alternaria solani) defoliation

[2] Fusarium wilt, Race 1 (F. oxysporum f. lycopersici)

[0] Fusarium wilt, Race 2 (F. oxysporum f. lycopersici)

[0] Gray leaf spot (Stemphylium solani, S. floridanum)

[0] Late blight, Race 0 (Phytophthora infestans)

[0] Late blight, Race 1 (Phytophthora infestans)

[0] Leaf mold, Race A (Cladosporium fulvum) [0] Leaf mold, Race B (C. fulvum)

[0] Leaf mold, Race C (C. fulvum)

[0] Leaf mold, other races (specify)_____

[0] Nailhead spot (Alternaria tomato) [0] Septoria leaf blight (Septoria spp.)

[0] Southern blight (Sclerotium rolfsii)

[0] Target leafspot (Corynespora casiicola)

[2] Verticillium wilt, Race 1 (V. albo-atrum) [0] Verticillium wilt, Race 2

[0] Brown root rot or corky root (Pyrenochaeta lycopersici)

[ ] Other diseases (specify)_____

Insects and Pests:

[0] Colorado potato beetle (Leptinotarsa decemlineata)

[2] Root knot nematode (Meloidogyne incognita)

[0] Tobacco flea beetle (Epitrix hirtipennis)

[0] Spider mites (Tetranychus spp.)

[1] Tomato hornworm (Manduca quinquemaculata)

[0] Tomato fruitworm (Heliothis zea)

[0] Whitefly (Trialeurodes vaporariorum)

EXECUTION COPY

GRANT OF SECURITY INTEREST

(PLANT VARIETY CERTIFICATES)

WHEREAS, W. ATLEE BURPEE COMPANY, a Pennsylvania corporation (herein referred to as "Grantor"), has been issued the Plant Variety Certificates listed on Schedule 1 annexed hereto;

WHEREAS, Grantor is a wholly owned Subsidiary of CDS Holding Corp.;

WHEREAS, Grantor has agreed to grant a first priority security interest in substantially all the assets of Grantor to secure the payment of all amounts owing under the Revolving Credit Agreement, dated as of December 30, 1986 (as amended, supplemented or modified from time to time, the "Credit Agreement"), among CDS Holding Corp., the O.M. Scott & Sons Company and Manufacturers Hanover Trust Company (the "Bank" and "Grantee"); and

WHEREAS, pursuant to the terms of a Subsidiary Security Agreement dated as of December 30, 1986 (the "Subsidiary Security Agreement") made by Grantor in favor of Grantee, its successors transferees and assigns Grantor has mortgaged, pledged and granted to Grantee a security interest in all right, title and interest of Grantor in, to and under all Certificates of Plant Variety Protection now or hereafter issued to the Grantee by the Plant Variety Protection Office of the United States Department of Agriculture (or any successor agency thereto) (all such Certificates being herein collectively referred to as "Plant Variety Certificates"), together with any reissues, extensions or renewals thereof whether presently existing or hereafter arising or acquired in connection with the tangible and intangible assets of the Grantor's business, including the goodwill of the business symbolized by the Plant Variety Certificates issued to and the applications therefor and the registrations thereof, and all products and proceeds thereof, including, without limitation, any and all causes of action which may exist by reason of infringement or dilution thereof or injury to the associated goodwill, to secure the payment of all amounts owing under the Credit Agreement and any and all other amounts from time to time directly owing by the Grantor to the Bank;

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, Grantor does hereby mortgage, pledge and grant to Grantee, its successors, indorses, transfees and assigns, a security interest in all of Grantor's right, title and interest in, to and under the following whether presently existing or hereafter arising or acquired:

(i) each Plant Variety Certificate and Plant Variety Certificate application, including, without limitation, each Plant Variety Certificate and Plant Variety Certificate application referred to in Schedule 1 hereto, and all of the goodwill of the business connected with the use of, and symbolized by, each Plant Variety Certificate and Plant Variety Certificate application;

(v) all products and proceeds of the foregoing, including, without limitation, any claim by Grantor against third parties for past, present or future infringement or dilution of any Plant Variety Certificate registration including, without limitation, any registration referred to in Schedule 1, or for injury to the goodwill associated with any Plant Variety Certificate or Plant Variety Certificate application.

This security interest is granted in conjunction with the security interest granted to the Grantee, its successors, indorses, transfees and assigns, in substantially all of the assets of the Grantor, as set forth in the Security Agreement, of which this Agreement is a part.

Grantor does hereby further acknowledge and affirm that the rights and remedies of Grantee with respect to the security interest in the Plant Variety Certificates, Plant Variety Certificates applications, made and granted hereby are more fully set forth in the Security Agreement, the

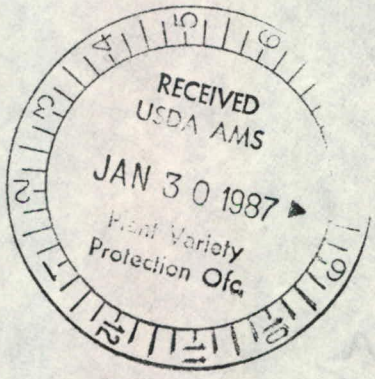
terms and provisions of which are incorporated by reference herein as if fully set forth herein. Terms defined in the Security Agreement shall have their defined meanings when used in this Grant of Security Interest.

IN WITNESS WHEREOF, Grantor has caused this Grant of Security Interest to be duly executed by its officers thereunto duly authorized as of the 30th day of December, 1986.

W. ATLEE BURPEE COMPANY

By: W. N. Burpee

Title: President



STATE OF NEW YORK)
) ss.:
COUNTY OF NEW YORK)

On the 30th day December, 1986, before me personally came William N. Englehart, to me personally known and known to me to be the person described in and who executed the foregoing instrument as President of W. Atlee Burpee Company, who being by me duly sworn, did depose and say that he resides at 5572 Long Lane, Doylestown, PA; that he is President of W. Atlee Burpee Company, the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that the said instrument was signed and sealed on behalf of said corporation by order of its Board of Directors; that he signed his name thereto by like order; and that he acknowledged said instrument to be the free act and deed of said corporation.

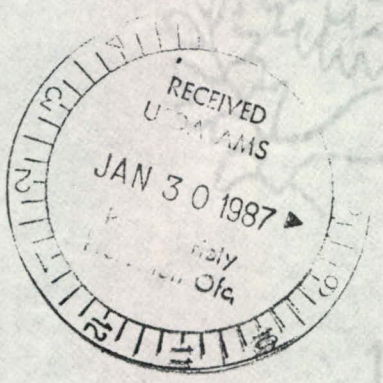
Loretta D Brenner
Notary Public

LORETTA D. BRENNER
Notary Public, State of New York
No. 60-4794803
Qualified in Westchester County
Certificate filed in New York County
Commission Expires March 30, 1987

[Seal]

My commission expires:

3/30/87



OWNER: W. ATLEE BURPEE COMPANY

PLANT VARIETY PROTECTION CERTIFICATES

CERTIFICATE NO.	TITLE AND SUBTITLE	ISSUE DATE	EXPIRATIC
7100001	LETTUCE 'Green Ice'	4/25/73	1990
7100002	CHINA ASTER 'Totem Pole White'	3/28/74	1991
7100003	CHINA ASTER 'Totem Pole Rose-Pink'	3/28/74	1991
7100004	CHINA ASTER 'Totem Pole Scarlet-Cerise'	3/28/74	1991
7100005	CHINA ASTER 'Totem Pole Azure Blue'	3/28/74	1991
7100006	CHINA ASTER 'Totem Pole Dark Blue'	3/28/74	1991
7100009	VERBENA 'Ruffled White'	4/8/75	1992
7100010	MARIGOLD 'Redcoat'	12/12/75	1992
7100053	CHINA ASTER 'Ideal Dark Blue'	3/14/75	1991
7100054	CHINA ASTER 'Ideal Rose'	3/14/74	1991
7100059	ZINNIA 'Emperor'	12/12/75	1992
7100077	CHINA ASTER 'Burpeeana Extra Early Rose'	3/28/74	1991
7100078	CHINA ASTER 'Burpeeana Extra Early Scarlet Morn'	3/28/74	1991
7100079	CALENDULA 'Golden Gem'	6/27/75	1992
7100081	MARIGOLD 'Golden Fantastic'	5/14/76	1993
7100085	SWEETPEA 'Salmonette'	12/12/75	1992
7100086	SWEETPEA 'Lavender Delight'	12/12/75	1992

OWNER: W. ATLEE BURPEE COMPANY

CERTIFICATE NO.	TITLE AND SUBTITLE	ISSUE DATE	EXPIRATION
7100087	SWEETPEA 'Tangerine'	3/5/76	1993
7100088	VERBENA 'Ruffled Pink'	4/8/75	1992
7200054	SQUASH 'Burpee Golden Zucchini'	2/15/75	1994
7200108	SNAPDRAGON 'Bright Scarlet'	11/24/75	1992
7400030	CALIFORNIA POPPY 'Ballerina Yellow'	4/18/75	1992
7400032	CALENDULA 'Orange Gem'	6/27/75	1992
7400033	ZINNIA 'Ruffled Jumbo Scarlet'	12/12/75	1992
7400034	MARIGOLD 'Big Almost White'	11/15/74	1991
7400040	BEAN 'Greensleeves'	6/18/76	1993
7500024	MARIGOLD 'Golden Hawaii'	3/5/76	1993
7500025	CHINA ASTER 'Red Mound'	6/27/75	1992
7600011	MARIGOLD 'Red Pygmy'	2/15/77	1994
7600071	PUMPKIN 'Triple Treat'	5/9/77	1994
7600072	WATERMELON 'Sugarbush'	7/26/77	1994
7800005	ZINNIA 'Rose Starlet'	2/2/78	1995
7800009	LETTUCE 'Royal Oak Leaf'	2/2/78	1995
7900060	MARGOLD 'Happy Red'	5/1/80	1997
8200017	MARIGOLD 'Xantho-Orange'	6/17/82	1999

1984

OWNER: W. ATLEE BURPEE COMPANY

CERTIFICATE NO.	TITLE AND SUBTITLE	ISSUE DATE	EXPIRATION
8200028	TOMATO 'Super Beefsteak'	8/19/82	1999
8200129	ASTER 'Pot 'n Patio Blue'	12/30/83	2000
8400138	PUMPKIN 'Bushkin'	8/30/85	2002
8500128	PEA 'Snappy'	10/31/85	2002
8600040	ZINNIA 'Pinwheel Rose'	8/31/86	2003

Applications

APPLICATION NO.	TITLE AND SUBTITLE	APPLICATION DATE
8400139	Watermellon 'Sweet Treat'	12/16/86
8600139	Basil 'Purple Ruffles'	7/7/86
8600149	Cucumber 'Picklebush'	7/9/86
8600158	Zinnia 'Red Lollipop'	9/3/86

1984

SECURITY AGREEMENT

SECURITY AGREEMENT, dated as of November 23, 1987, made by W. Atlee Burpee Company, a Pennsylvania corporation (the "Debtor") in favor of Bankers Trust Company, a New York banking corporation (the "Secured Party"). Unless otherwise defined herein or in Article XI hereof, all capitalized terms used herein and defined in the Credit Agreement are used herein as therein defined.

W I T N E S S E T H:

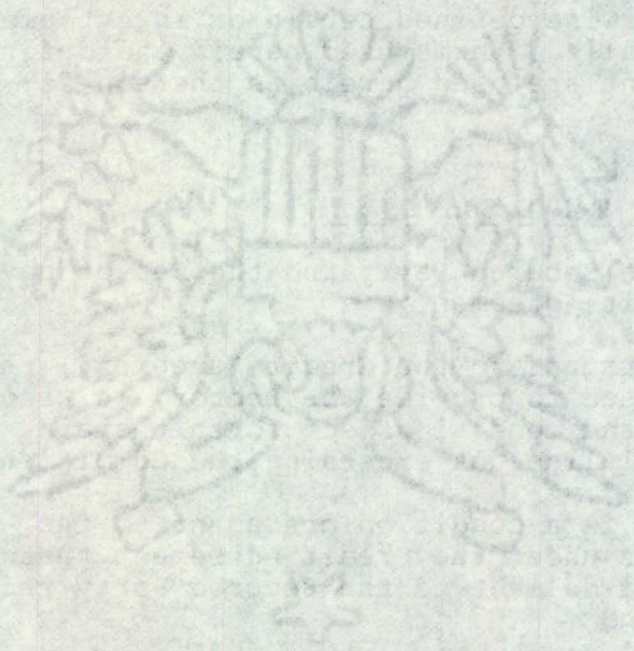
WHEREAS, the Secured Party and the Debtor have entered into the Credit Agreement;

WHEREAS, pursuant to the Credit Agreement, the Secured Party has agreed to provide the Debtor, in accordance with the terms and conditions set forth therein, with a working capital line not exceeding the Commitment;

WHEREAS, it is a condition precedent to the incurrence of Advances under the Credit Agreement that the Debtor execute and deliver to the Secured Party this Security Agreement; and

WHEREAS, the Debtor desires to execute this Security Agreement to satisfy the condition described in the preceding paragraph;

NOW, THEREFORE, in consideration of the premises and other benefits to the Debtor, the receipt and sufficiency of which are hereby acknowledged, the Debtor hereby makes the following representations and warranties and hereby covenants and agrees as follows:



Annex 11.2

Plant Variety Protection Certificates

CERTIFICATE NO.	TITLE AND SUBTITLE	ISSUE DATE	EXPIRATION
7100001	LETTUCE 'Green Ice'	4/10/73	1990
7100002	CHINA ASTER 'Totem Pole White'	3/28/74	1991
7100003	CHINA ASTER 'Totem Pole Rose-Pink'	3/28/74	1991
7100004	CHINA ASTER 'Totem Pole Scarlet-Cerise'	3/28/74	1991
7100005	CHINA ASTER 'Totem Pole Azure Blue'	3/28/74	1991
7100006	CHINA ASTER 'Totem Pole Dark Blue'	3/23/74	1991
7100009	VERBENA 'Ruffled White'	4/8/73	1992
7100010	MARIGOLD 'Redcoat'	12/12/73	1992
7100053	CHINA ASTER 'Ideal Dark Blue'	3/14/74	1991
7100054	CHINA ASTER 'Ideal Rose'	3/14/74	1991
7100059	ZINNIA 'Emperor'	12/12/75	1992
7100077	CHINA ASTER 'Burpeeana Extra Early Rose'	3/28/74	1991
7100078	CHINA ASTER 'Burpeeana Early Early Scarlet Morn'	3/28/74	1991

CERTIFICATE NO.	TITLE AND SUBTITLE	ISSUE DATE	EXPIRATION
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7100086	SWEETPEA 'Lavender Delight'	12/12/75	1992
7100087	SWEETPEA 'Tangerine'	3/5/76	1993
7100088	VERBENA 'Ruffled Pink'	4/8/75	1992
7200054	SQUASH 'Burpee Golden Zucchini'	2/15/77	1994
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CERTIFICATE NO.	TITLE AND SUBTITLE	ISSUE DATE	EXPIRATION
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7600071	PUMPKIN 'Triple Treat'	5/9/77	1994
7600072	WATERMELON 'Sugarbush'	7/26/77	1994
7800005	ZINNIA 'Rose Starlet'	2/2/78	1995
7800009	LETTUCE 'Royal Oak Leaf'	2/2/78	1995
7900060	MARIGOLD 'Happy Red'	5/1/80	1997
8200017	MARIGOLD 'Xantho-Orange'	6/17/82	1999
8200028	TOMATO 'Super Beefsteak'	8/19/82	1999
8200129	ASTER 'Pot 'n Patio Blue'	12/30/83	2000
8400138	PUMPKIN 'Bushkin'	8/30/85	2002
8500128	PEA 'Snappy'	10/31/85	2002
8600040	ZINNIA 'Red Lollipop'	8/31/86	2003

Plant Variety Protection Certificates Applications

APPLICATION NO.	TITLE AND SUBTITLE	APPLICATION DATE
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8600139	Basil 'Purple Ruffles'	7/7/86
8600149	Cucumber 'Picklebush'	7/9/86
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